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EXAMINER

OSELE, MARK A

ART UNIT

PAPER NUMBER

1734

DATE MAILED: 01/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/792,343

Applicant(s)

TOMINAGA, MITSUHIRO

Examiner

Mark A. Osele

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 21 June 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-5,9-12 and 14-37 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5,9-12 and 14-37 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 2, 4-5, 9-13, 16-19, 22-23, 25, 27-29, 32-34, and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nose et al. (US 5,685,944) in view of Mendelovich et al. (US 5,735,999) and Akemi et al. (US 5,505,306). Nose et al. discloses a transfer tool comprising a housing (Figure 2, casing C, case members C1 and C2) having an interior surface; and ribbon substrate (Figure 1, film transfer ribbon R) that travels inside the housing, the ribbon substrate being coated with a coating film to be transferred from the ribbon substrate (column 10, lines 23-27). Nose et al. does not disclose a transfer tool wherein the interior surface of the housing is roughened at least in a region wherein the coating film on the ribbon substrate may contact the interior surface of the housing.

Mendelovich et al. discloses a transfer tool wherein the interior surface of the housing includes projections, 66, at least in a region wherein adhesive elements on a carrier tape may contact the interior surface of the housing (Figure 7) to prevent the adhesive tape from undesirably sticking to the interior surface of the housing (column 5, lines 1-15). It would have been obvious to one of ordinary skill in the art at the time of

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the invention to modify the transfer tool of Nose et al. to include projections on the interior surface of the housing as suggested by Mendelovich et al. to prevent the coating film from adhering to the interior surface of the housing. The references as combined fail to discuss the center average height of the projections.

Akemi et al. teaches that the height of projections for preventing an adhesive film from sticking to a surface and the proportion of the surface area comprising the projections vary depending upon the composition of the adhesive (column 4, lines 30-63). Akemi et al. further teaches the preferred height of the projections to be 2 to 1000  $\mu\text{m}$ . It would have been obvious to one of ordinary skill in the art at the time the invention was made to make the center average height of the projections of the references as combined greater than 7  $\mu\text{m}$  because Akemi et al. teaches that this range is satisfactory for conventional adhesives. Furthermore, Akemi et al. teaches that the projection height is a result effective variable dependent upon the composition of the adhesive and one of ordinary skill in the art would use routine optimization to determine the appropriate height.

Regarding independent claim 23, Akemi et al. teaches that the percentage of the projections is also dependent upon the composition of the adhesive. It would have been obvious to one of ordinary skill in the art at the time the invention was made to make the ratio of a pitch to a height of the projections equal to or lower than 22.0 because Akemi et al. teaches that the projection height and pitch are result effective variables dependent upon the composition of the adhesive and one of ordinary skill in the art would use routine optimization to determine the appropriate ratio.

As to claims 2 and 25, the references as combined (see Nose et al.) disclose a transfer tool wherein the ribbon substrate is a tape (see Figure 1, film transfer ribbon R).

As to Claim 4, the references as combined (see Mendelovich et al.) disclose a transfer tool wherein the roughened surface is formed of multiple projections wherein each projection has a higher point than any other points thereof in its configuration.

Regarding claim 5, for the reasons listed above, it would have been obvious for one of ordinary skill in the art to make the center average height of the projections of the references as combined greater than 9  $\mu\text{m}$ .

Regarding claim 9, Akemi et al. teaches that geometries such as projection height and pitch are result effective variables dependent upon adhesive composition, therefore, the load length ratio would be determined by routine optimization

As to claims 10 and 27, the references as combined are silent as to a transfer tool wherein the entire inner surface of the housing has a roughened surface. When modifying the transfer tool of Nose et al. as noted above to include roughening the interior surface of the housing to prevent the coating film from adhering to the interior surface of the housing, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the housing of Nose et al. to include projections on its entire inner surface to minimize the possibility of having the coating film undesirably adhere to any portion of the housing's interior.

As to claims 11 and 28, the references as combined (see Mendelovich et al.) disclose a transfer tool wherein the housing has projections along a path where the ribbon substrate (Figure 7, carrier tape 98) travels inside the housing.

As to claims 12 and 29, the references as combined (see Mendelovich et al.) disclose a transfer tool further comprising a dispenser at which the coating film is dispensed from the ribbon substrate, wherein the projections provided on an upstream side of the dispenser.

As to claim 16, the references as combined (see Mendelovich et al.) disclose a transfer tool wherein the projections are formed in a repetition of a predetermined pattern (Figure 7). In any event, it would have been readily apparent to one of ordinary skill in the art at the time of the invention to select the shape of the projections to form a variety of patterns as an aesthetic design choice.

As to claims 17 and 32, the references as combined (see Nose et al.) disclose a transfer tool wherein the coating film is a correction film (column 21, lines 53-54).

As to claims 18 and 33, the references as combined (see Nose et al.) disclose a transfer tool wherein the coating film is an adhesive film (column 10, lines 23-27).

As to claims 19 and 34, the references as combined (see Nose et al.) disclose a transfer tool wherein the ribbon substrate is formed mainly of polyethylene (column 14, lines 30-32) and has a thickness of about 25  $\mu\text{m}$  (column 10, lines 23-24).

As to claims 22 and 37, the references as combined (see Nose et al.) disclose a transfer tool wherein the coating film is about 20  $\mu\text{m}$  in thickness (column 10, lines 25-26).

3. Claims 3 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nose et al. (US 5,685,944) in view of Mendelovich et al. (US 5,735,999) and Akemi et

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al. as applied to claims 1 and 23 above, and further in view of the admitted prior art and Daouse et al. The references as combined do not disclose a transfer tool wherein at least the roughened surface of the housing contains a non-stick material. The admitted prior art discloses a transfer tool wherein a surface of the housing contains a non-stick material (page 2 of the specification, paragraph 8). When modifying the inner surfaces of the housing as noted above to be resistant to the undesired adhesion of the coating film, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the roughened surface of the housing of the references as combined to contain a non-stick material as suggested by the admitted prior art to provide the interior surface of the housing with additional resistance to the undesired adhesion of the coating film.

Daouse et al. teaches that an effective plastic material for non-stick objects is polyethylene (column 4, lines 52-55). It would have been obvious to one of ordinary skill in the art at the time the invention was made to make the housing of the references as combined of polyethylene because Daouse et al. teaches this to be a well known non-stick material.

4. Claims 14-15 and 30-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nose et al. (US 5,685,944) and Fischer (US 4,704,185) or Mendelovich et al. (US 5,735,999) as applied to claims 1 and 23 above, and further in view of the admitted prior art and Bannon et al. (US 2,403,964). As to Claim 14, the references as combined do not disclose a transfer tool wherein at least the roughened

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surface of the housing contains a non-stick material. The admitted prior art discloses a transfer tool wherein a surface of the housing contains a non-stick material (page 2 of the specification, paragraph 8). When modifying the inner surfaces of the housing as noted above to be resistant to the undesired adhesion of the coating film, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the housing and the roughened inner surface of the references as combined to contain a non-stick material as suggested by the admitted prior art to provide the interior surface of the housing with additional resistance to the undesired adhesion of the coating film.

As to claims 14 and 30, the references as combined do not disclose a transfer tool wherein the non-stick material is selected from a group comprising magnesium stearate, zinc stearate, aluminum stearate, and calcium stearate. Bannon et al. discloses a surface coating for packages which includes zinc stearate for controlling and reducing the cohesive tendency of the material being transported from adhering to its container (column 2, lines 28-40). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the housing and the interior surface of the references as combined to include zinc stearate, as suggested by Bannon et al. to reduce and control the cohesive tendency of the coating film from adhering to the housing or the roughened surface.

As to claims 15 and 31, the references as combined are silent as to a transfer tool wherein the housing and the roughened inner surface are formed of a material comprising a non-stick material in an amount of 0.3 to 0.8% of material weight. It would have been obvious to one of ordinary skill in the art at the time of the invention to



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determine the optimal weight percentage of the non-stick material in the composition of the housing and its interior surfaces to maximize the resistance of the housing and the roughened surface to adhesion of the coating film. It is noted that where general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation. *In re Aller*, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955).

5. Claims 20 and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nose et al. (US 5,685,944) in view of Mendelovich et al. (US 5,735,999) as applied to claims 1 and 23 above, and further in view of Van Hoof et al. (US 3,936,571). The references as combined do not disclose a transfer tool wherein the ribbon substrate is processed for both surfaces to exhibit releasability. It is well known and conventional in the tape dispenser art, as disclosed by Van Hoof et al. (column 3, lines 41-48), to coat one or both sides of a liner carrying an adhesive tape with an anti-adhesion agent to prevent adjacent convolutions of the adhesive tape roll from bonding together, as well as for handling adhesive tapes which have an adhesive layer on both sides. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the ribbon substrate of the references as combined to have both surfaces coated with an anti-adhesion agent as suggested by Van Hoof et al.; coating both sides of a release liner being well established in the art for preventing adjacent convolutions of an adhesive tape roll from bonding together.

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6. Claims 21 and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nose et al. (US 5,685,944) and Fischer (US 4,704,185) or Mendelovich et al. (US 5,735,999) as applied to claims 1 and 23 above, and further in view of Yamashita (US 2004/0180196). The references as combined are silent as to the composition of the coating film. Yamashita discloses a transfer tape comprising an emulsion-type acrylic adhesive, a rosin-type tackifier, a phthalocyanine blue colorant, crawling inhibitor, and water, which maintains strong adhesive strength but can be reliably cut at a stipulated position (abstract; page 3, paragraphs 36-42). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the coating film of the references as combined to include an emulsion-type acrylic adhesive, a rosin-type tackifier, a phthalocyanine blue colorant, crawling inhibitor, and water as suggested by Yamashita to provide a transfer tape which maintains strong adhesive strength but can be reliably cut at a stipulated position.

7. Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nose et al. (US 5,685,944) and Fischer (US 4,704,185) or Mendelovich et al. (US 5,735,999) as applied to claim 23 above, and further in view of Cheng (US 4,768,427). The references as combined fail to show the claimed angle. Cheng shows a non-stick surface wherein a series of pointed projections (Fig. 3, element 8) having a tapered angle between 5 and 120° is effective for preventing articles from sticking to the surface. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the tapered angle of the projections of Cheng in the apparatus of the

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references as combined because this geometry is shown to be effective in stick prevention.

### ***Response to Arguments***

8. Applicant's arguments with respect to claims 1-5, 9-12, 14-37 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

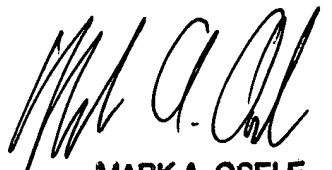
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

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10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mark A. Osele whose telephone number is 571-272-1235. The examiner can normally be reached on M-F 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christopher Fiorilla can be reached on 571-272-1187. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



**MARK A. OSELE**  
**PRIMARY EXAMINER**

January 9, 2006